CLAIMS

1. Four isolated nucleic acid sequences from *Castanea sativa* Mill. Comprising encoding regions for Allene Oxide Cyclase (AOCCs), Cystatin (CystCs), β-1,3-Glucanase (GlucCs) and Thaumatin-Like Protein (TLPCs) proteins.

2. The isolated nucleic acid molecule, according to claim 1, wherein the polynucleotide has the sequence of SEQ. ID. NO: 1.

3. The isolated nucleic acid molecule, according to claim 2, wherein the polynucleotide encodes an Allene Oxide Cyclase polypeptide.

4. The isolated nucleic acid sequences according to claim 2, wherein the polynucleotide encodes a protein or polypeptide having an amino acid sequence of SEQ. ID. NO: 2.

5. The isolated nucleic acid molecule, according to claim 1, wherein the polynucleotide has the sequence of SEQ. ID. NO: 3.

6. The isolated nucleic acid molecule, according to claim 5, wherein the polynucleotide encodes a Cystatin polypeptide.

7. The isolated nucleic acid sequences according to claim 5, wherein the polynucleotide encodes a protein or polypeptide having an amino acid sequence of SEQ. ID. NO: 4.

8. The isolated nucleic acid molecule, according to claim 1, wherein the polynucleotide has the sequence of SEQ. ID. NO: 5.

9. The isolated nucleic acid molecule, according to claim 8, wherein the polynucleotide encodes a β-1,3-Glucanase polypeptide.

10. The isolated nucleic acid sequences according to claim 8, wherein the polynucleotide encodes a protein or polypeptide having an amino acid sequence of SEQ. ID. NO: 6.

11. The isolated nucleic acid molecule, according to claim 1, wherein the polynucleotide has the sequence of SEQ. ID. NO: 7.

12. The isolated nucleic acid molecule, according to claim 11, wherein the polynucleotide encodes a Thaumatin-Like Protein polypeptide.

13. The isolated nucleic acid sequences according to claim 11, wherein the polynucleotide encodes a protein or polypeptide having an amino acid sequence of SEQ. ID. NO: 8.

14. The isolated nucleic acid sequences according to claim 1, presented as RNA, mRNA, cRNA, DNA or cDNA molecules.

15. The isolated nucleic acid sequences described in claim 1, which can be used together with other genes expressed in *Castanea sativa* Mill.

16. A chimeric gene comprising one or more nucleic acid molecules according to claim 1 in sense orientation and which can be operably linked to a promoter.

17. Any expression cassette comprising one of the chimerical genes described in claim 16.

18. Any replicable expression vector comprising one of the chimerical genes described in claim 16.

19. A plant genome comprising one of the chimerical genes described in claim 16.

20. A host cell transformed with one of the chimerical genes described in claim 16.

21. A genetically modified plant containing one of the chimerical genes described in claim 16, wherein said chimerical gene is stably integrated into the plant genome.

22. The progeny of cross breeding involving the plant described in claim 21.

23. The fruit or seeds comprising one of the chimerical genes described in claim 16, wherein said chimerical gene, is stably integrated into the plant genome.

24. Any method of improving the defence response signalling to the ink disease, the method comprising introduction into the plant of an expression cassette according to the described in claim 17.

25. Any method of improving the counteract of fungal protease action, the method comprising introduction into the plant of an expression cassette according to the described in claim 17.

26. Any method of improving the attack of the fungal cell wall, the method comprising introduction into the plant of an expression cassette according to the described in claim 17.

27. Any method of improving the permeability and rupture of the fungal cellular membrane, the method comprising introduction into the plant of an expression cassette according to the described in claim 17.